13. *Quinia as a Gargle in Diphtheritic, Scarlatinal, and other forms of Sore Throat.*—Dr. DAVID J. BRAKENRIDGE observes (*The Practitioner*, Aug. 1875) that "the following facts, among others, may be regarded as established:—

"1. Quinine is a protoplasm poison, and limits the number and movements of the white blood corpuscles and pus cells.

"2. It prevents the pathological migration of the blood corpuscles into the tissues of the membranous and parenchymatous organs exposed to the air, both when it is given subcutaneously and when it is directly applied to the part.

"3. It restrains the dilatation of the bloodvessels.

"4. It is an antiseptic, and exerts a paralyzing, or, in larger doses, a destructive influence on microzymes.

"With these facts in view, the theoretical appropriateness of quinine as a gargle in diphtheria with abundant proliferation of micrococci, and in scarlatinal, and various other forms of sore throat, especially when attended with membranous exudation, pultaceous secretion, or ulceration, is apparent. For it antagonizes all the visible factors of such forms of inflammation.

"Before employing it for this purpose, I was familiar with the use of solution of quinine as a dressing in bed-sores and other tedious ulcers. The marked diminution in the secretion of pus and the rapid improvement which I observed to take place in these cases when so treated, first led me to anticipate good results from quinine as a gargle.

"For the last four months I have treated every suitable case of sore throat that I have met with in my wards in the Royal Infirmary and elsewhere, with a gargle composed, as a rule, of two grains of sulphate of quinine and five minims of dilute sulphuric acid to each ounce of water. Sometimes I have been able to increase the strength; sometimes I have been compelled to diminish it. When well tolerated, the stronger it is the better.

"The results I have obtained fully confirm my favourable anticipations. From a considerable number of cases I draw the following conclusions:—

"Simple non-syphilitic ulcers of the throat, under this treatment, at once assume a healthier aspect and heal rapidly.

"In syphilitic ulcers, the local treatment has always been accompanied by the internal administration of iodide of potassium, or some other suitable constitutional remedy; but my impression is that, in these cases, the cure is hastened by the quinine gargle.

"Its effect in the sore throat of scarlatina is very marked, the pultaceous secretion being checked, and the inflammatory swelling diminished.

"It is of comparative little use in the early stage of cynanche tonsillaris, over which tincture of aconite, in minim doses frequently repeated, has so decided a control. When, however, abscess followed by abundant discharge of pus results, its beneficial influence in checking the suppuration and promoting healing is marked.

"In the slighter forms of diphtheritic sore throat, it answers admirably, preventing the extension of the disease, and promoting the separation of the membranous exudation.

"It is, however, in severe cases of true diphtheria that I hope it will prove most useful. I have now employed it in three cases of this disease, and in all the result has been highly satisfactory."

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14. *Action of Mercury on the Liver.*—Sir ROBERT CHRISTISON, in his instructive presidential address before the British Medical Association at its meeting the present year, stated, that, "While deeply interested in, and much instructed by, the experiments performed by a Committee of this Association, regarding the use of mercury, for example, I remain as thoroughly convinced as ever that the much abused drug in question exerts a powerful action on the function of the liver, and is to be trusted as a most efficient remedy in controlling not a few of its disorders."—*Brit. Med. Journ.*, August 7, 1875.

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15. *Narcotism by the Products of Tissue Change after Fatigue.*—The fact that severe fatigue, either of the muscular or nervous system, predisposes to sleep, has led Dr. W. Preyer, of Jena, to make experiments with those sub-

stances which are most likely to be formed in the tissues after such exertion, especially lactic acid, to see whether they possess any narcotic properties. He finds, after a long series of observations and experiments, that lactate of soda, either subcutaneously injected in a concentrated aqueous solution, or else introduced into the empty stomach in large doses. frequently induces sleep if the subject of the experiment is kept quiet and undisturbed. There are, however, considerable individual differences in its effects both on animals and men, not only as to the time of onset of sleep, but also as to its duration and intensity. Young and small animals are affected more easily than old and large animals. Preyer finds that the exhibition of such liquids as are favourable to an abundant production of lactate of soda in the intestinal canal—*e. g.*, concentrated syrup, or copious draughts of sour milk and of whey—in many cases gives rise to drowsiness, and even actual sleep: and he thinks that this fact might be of practical application in some diseases where morphia and chloral are now exclusively ordered. Lactate of soda, in doses much larger than are required to induce sleep, increases the number of the respirations and also their depth; and reflex irritability and (in warm-blooded animals) the temperature are diminished. Dr. Preyer, from his experiments on animals, is strongly opposed to the use of the lactates of potash, magnesia, and lime for narcotic purposes in the human subject.—*Medical Times and Gazette*, Aug. 28, from *Centralblatt*, No. 35, August, 1875.

16. *A Method of increasing the Solubility of Salicylic Acid.*—An objectionable property of the new antiseptic, and threatened rival of carbolic acid—salicylic acid—is its insolubility in cold water, so that it has been, till now, impossible to obtain a stronger solution of it than 1 part to 300; while the alcoholic solution and the pure acid are too irritating to be applied directly to a wound. Those, therefore, who are specially interested in comparing the antiseptic properties of the two acids, will be glad to know that the solubility of the latter is enormously increased by the addition of borax to the water, so that as much as ten parts of the acid can be dissolved in 100 parts of water, if eight parts of borax be present. This discovery we owe to Dr. H. Bose, assistant in the Surgical Clinic at Berlin, who has contributed a paper of much interest to the *Berliner Klinische Wochenschrift* (No. 28, July 12), to which we are indebted for the following details. The solution should be made by first dissolving the borax with the aid of heat, and then gradually adding the salicylic acid to the boiling fluid. Since commercial samples of both these drugs are not chemically pure, a small amount separates, and requires to be filtered off on cooling. The filtrate is a clear yellowish or light-brown fluid, according to its concentration. The proof that the addition of borax does not convert more than a part of the salicylic acid into salicylate of soda—a salt devoid of antiseptic properties—is easily shown; for if we dissolve 6.9 parts of the acid in 100 parts of boiling water, and then add 2.89 parts of bicarbonate of soda, the carbonic acid in the latter is set free, while the soda combines with the salicylic acid, and on cooling there is such an abundant deposition of the excessive acid that the whole liquid becomes nearly solid, owing to the formation of crystals. Now if the whole be reheated until the acid is completely dissolved, and then 3.58 parts of boracic acid added, no deposit of any kind occurs on cooling. The most suitable strength in which the above solution can be used for direct application to wounds, is, according to Dr. Bose's experience, one which contains from 2½ to 5 per cent. of salicylic acid, and 2 to 4 per cent. of borax. Solutions containing more than 5 per cent. of acid are too irritating, and give rise to a very abundant capillary hemorrhage if applied to the surface of a fresh wound. Dr. Bose speaks highly of the result obtained with the boro-salicylic dressing in a number of cases of removal of small tumours. The operations were all performed without the spray, and only the sponges and forceps used were cleansed antiseptically with the above solution. The wound was thoroughly washed with the same liquid, and then a thick layer of salicylic wadding, also soaked with it, was laid on its apposed edges, so as to reach several fingers' breadths beyond them, and fixed by means of a bandage; catgut was used to tie any vessels